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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,804	01/21/2005	Jacobus A Rozendaal	SFM-0001-US	3801
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BRUNET & CO. LTD. 10712 MELROSE DR. KOMOKA, ON N0L-1R0 CANADA			EXAMINER MCGOWAN, JAMIE LOUISE	
			ART UNIT 3671	PAPER NUMBER
			NOTIFICATION DATE 08/20/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/521,804	Applicant(s) ROZENDAAL ET AL.	
	Examiner JAMIE L. MCGOWAN	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-59, 71, 72, 74 and 76-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-59, 71, 72, 74 and 76-85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 80 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase, "when viewed from the left side of the implement" is indefinite because it is unclear what the left side of the implement is. If the observer is standing in front of the implement and looking back, the left side is different than if the observer is standing behind the implement and looking ahead.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 51, 53-57, 71, 72, 74, 77-80, 82 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Rogers (3,502,154) in view of McIlhargey (6,412,571), Rawson (5,462,124) and Wright et al. (5,956,934).

Regarding claim 51, Rogers discloses a conservation tillage implement comprising:

- A cultivator frame (10)
- A plurality of tillage implement assemblies including at least two left side assemblies and at least two right side assemblies

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- A plurality of mounting structures, each corresponding to one of the plurality of tillage implements
- The cultivator frame being configured to receive the plurality of mounting structures such that the plurality of individual tillage implement assemblies are disposed in three or more longitudinally spaced apart rows of laterally spaced apart individual assemblies, each assembly individually mounted to the frame using the mounting structure, wherein a implement assembly in a given row is staggered with respect to the implement assemblies in a longitudinally adjacent row in order to reduce plugging of crop residue between the implements

While Rogers discloses the invention as described above, it fails to disclose that the tillage implements could be coulter wheels mounted with a coil spring with a horizontal axis to allow for deflection. Like Rogers, McIlhargey also disclose a minimum tillage implement. Unlike Rogers, McIlhargey discloses that it is known in the art to use individually mounted coulter wheels with coil springs with a horizontal axis on a minimum tillage implement. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the tillage implements of Rogers with the coulter wheel and coil spring assemblies of McIlhargey as a simple substitution of one known element for another to yield predictable results as both the tillage implements of Rogers and the coulter discs of McIlhargey are known in the art as effective minimum tillage implements (KSR International Co. v. Teleflex Inc., 550 USPQ2d 1385 (2007)).

While the combination of Rogers and McIlhargey discloses the invention as described above, it fails to disclose that the coil springs on the right side of the frame are wound in one direction and that the coil springs on the left side of the frame are wound in an opposite direction. Like Rogers and McIlhargey, Wright et al. also disclose an agricultural implement frame with implements individually mounted using coil springs. Unlike the combination of Rogers and McIlhargey, Wright further disclose that the coil springs on the left side of the frame are wound clockwise and the coil springs on the right side of the frame are wound counter clockwise. It would have been obvious to one

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of ordinary skill in the art at the time the invention was made to use the opposite winding technique of Wright et al. in the combination of Rogers and McIlhargey as the use of a known technique to improve similar devices in the same way (KSR International Co. v. Teleflex Inc., 550 USPQ2d 1385 (2007)).

While the combination of Rogers, McIlhargey and Wright et al. discloses the invention as described above but fails to disclose that the coulter wheel assemblies can pivot around a vertical axis. Like the combination, Rawson also discloses a coulter wheel assembly. Unlike the combination, Rawson further discloses that the coulter wheel assemblies can pivot about a vertical axis through the use of a vertically extending hollow strut (42) having a pair of opposed horizontal slots (43) therethrough and a shank with a horizontal hole, wherein the shank (31) is secured within the hollow strut (42) by means of a horizontal pin (44) extending through the slots (43) and the hole, thereby permitting rotational movement of the shank (31) within the hollow strut about the vertical axis (See Figure 5 for pin (44) extending all the way through hollow strut (42) and shank (31)). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the pivoting structure of Rawson in the device of Rogers, McIlhargey and Wright et al. to allow the coulter wheel assembly to pivot to prevent breakage and avoid damage in the event that an obstacle is encountered while working the field.

Regarding claim 53, the combination discloses that each coulter wheel assembly comprises a coulter wheel and structure for coupling the coulter wheel to the corresponding coil spring (McIlhargey - Figure 2).

Regarding claim 54, the combination disclose that each coil spring comprises a coil spring having integral upper and lower shank ends extending tangentially therefrom (McIlhargey – Figures 1 and 2).

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Regarding claim 55, the combination discloses that the lower shank end is permitted to deflect upwardly about the horizontal spring axis in response to impact with an obstacle.

Regarding claim 56, the combination discloses that the mounting structure allows for rotational movement of the coulter wheel assembly less than substantially plus or minus 30 degrees about a vertical axis.

Regarding claim 57, the combination discloses that the mounting structure comprises a vertically extending hollow strut (42) having a pair of opposed horizontal slots (43) therethrough (Rawson).

Regarding claim 58, the combination discloses that the upper shank of the coil spring has a horizontal hole there through and wherein the shank is secured in a hollow strut by means of a horizontal pin extending through the slots and the hole to permit rotational movement of the shank within the hollow strut about the vertical axis (McIlhargey discloses that the coulter is mounted via a coil spring and Rawson discloses the hollow strut with a pin extending through two slots and a hole in the mounting structure (i.e. the shank of the coil spring)).

Regarding claim 71, the combination discloses that each coulter wheel assembly is able to deflect upwardly in response to impact with an obstacle.

Regarding claim 72, the combination discloses that the frame comprises three or more longitudinally spaced apart transverse cross members.

Regarding claim 74, the combination discloses that the coulter wheel assemblies are mounted to the transverse cross members.

Regarding claim 77, the combination discloses that there are a plurality of transverse cross member for a given row.

Regarding claim 78, the combination discloses that the plurality of transverse cross members are aligned along a common transverse axis.

Regarding claim 79, the combination discloses that the implement is able to operate at shallow depths of less than 4-6" for seedbed preparation.

Regarding claim 80, each coil spring on the left side of the implement is wound counter clockwise and each coil spring on the right side of the implement is wound clockwise.

Regarding claim 82, the combination discloses that each coulter wheel assembly is able to deflect upwardly in response to impact with an obstacle by an amount sufficient to permit the implement to operate at speeds of 8 to 12 mph without damaging the implement upon impact.

Regarding claim 83, the combination discloses that the implement is able to operate at shallow depths of as little as 1" for seedbed preparation (Rogers discloses adjustable wheel assemblies that would allow for the coulter assemblies to be placed at any desired depth).

4. Claims 52, 81, 84 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers (3,502,154) in view of McIlhargey (6,412,571), Rawson (5,462,124) and Wright et al. (5,956,934) as applied to claim 51 above, and further in view of Coufal (4,350,211).

Regarding claims 52, 81 and 84, while the combination of Rogers, McIlhargey, Rawson and Wright et al. discloses the invention as described above, it fails to disclose that the coulter wheel assemblies are laterally adjustable. Like the combination, Coufal also discloses an agricultural implement with staggered tillage implements. Unlike the combination, Coufal further discloses that the tillage implements are laterally adjustable.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to include laterally adjustable coulter wheels in the combination as taught by Coufal to allow the operator to adjust the distance between rows during tillage operations so as to allow the frame to be used for a variety of different crops.

Regarding claim 85, the combination discloses that the mounting structure include horizontal pivot structure configured to permit the corresponding coulter wheel assembly to rotate about a vertical axis when contacting a ground obstacle.

5. Claims 59 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers (3,502,154) in view of McIlhargey (6,412,571), Rawson (5,462,124) and Wright et al. (5,956,934) as applied to claim 51 above, and further in view of Dietrich, Sr. et al. (6,896,068).

Regarding claims 59 and 76, while the combination of Rogers, McIlhargey, Rawson and Wright et al. discloses the invention as described above, it fails to disclose that there are also removable individual field working tools and wherein the individual coulter wheel assemblies in a given row are staggered with respect to all coulter wheel assemblies and field working tools in longitudinally adjacent rows of the implement. Like the combination, Dietrich, Sr. et al. also discloses a tillage implement. Unlike the combination, Dietrich, Sr. et al. further discloses that the primary tillage implements are followed by secondary removable field working tools (60) that are staggered. Dietrich, Sr. et al. teaches that the field working implements (60) function to level the soil after tillage. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the secondary field working tools of Dietrich, Sr. et al. in the combination of Rogers, McIlhargey, Rawson and Wright et al. to level the tilled land prior to seeding.

Response to Arguments

6. Applicant's arguments with respect to claims 51-59, 71, 72, 74, and 76-85 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE L. MCGOWAN whose telephone number is (571)272-5064. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571)272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas B Will/
Supervisory Patent Examiner
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JLM
August 11, 2009

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